UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,614	07/31/2000	John Christopher Brock	2386.2007-000	3854

21005	7590	12/30/2004

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER
KANG, PAUL H

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application N .	Applicant(s)
Office Action Summary		09/628,614	BROCK ET AL.
		Examiner	Art Unit
		Paul H Kang	2141

-- The MAILING DATE of this communication appears on the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 September 2004</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some *　c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Examiner Yussuf Sajid is no longer assigned to the present patent application. This

5   application is now assigned to Examiner Paul H. Kang. In examining this patent application, full

faith and credit has been given to the search and action of the previous examiner. See MPEP §

719.05.

Claim Rejections ~ 35 U.S.C. § 103

10   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
15 > to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

Claims 1, 12, 23, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

20   **Eldumiati et al. (US 2002/0012388 A1), in view of Hendel et al. (US 5,313,582), and further**

in view of Rizvi et al. (US 6,199,110).

As per claims 1, 12, 23, 25, and 27, Eldumiati teaches sending connection data, wherein

the connection data is associated with a current connection between the server communication

25   device and the data access device, from the server communication device to the data access

device for storage on the data access device (Page 2, paragraphs [0025]-[0030]: Eldumiati

discloses a modem transmitting identification data to another modem and further encoded in

accordance with any number of coding algorithm. Eldumiati further teaches wherein the data

exchanged has to do with the current connection such that the data can help in identifying and

diagnosing connectivity problems particularly in connections that fail before communication

protocols can be established). However, Eldumiati doesn't explicitly teach the server

5   communication device to send a storage capability request to the data access device for

determining storage capability of the data access device, nor does he explicitly teach the data

access device replying with a storage capability reply to the server communication device, and

sending the connection data based on the storage capability reply.

Hendel teaches a method and apparatus for buffering data within stations of a

10   communication network, where each station consists of CPU, a program memory, a system

memory, a communication controller, a system bus, and a communication medium interface unit

(Col 2, lines 5-13). Hendel further discloses a memory storage request from the host processor to

Packet Number Assignment Unit 62', the packet number assignment unit will transmit a page

request signal to memory allocation and management unit 61', which in response, searches from

15   available space, and either returns a valid packet number or invalid number to the host processor

based on available memory (Col 25, lines 24-57).

By implementing the buffering of data in the system of Eldumiati, the modems of

Eldumiati would have less strain on them and have more processing power to execute other

functions.

20   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Hendel in the system of Eldumiati, because by

implementing the method as described above, each station is enabled to receive and transmit

consecutive data packets in a manner less sensitive to processor interrupt latency, while

optimally using memory and minimizing host processor overhead and necessity of copying data

between structures (Col. 1, lines 9-16).

Further, Eldumaiati-Hendel does not explicitly teach a system and method further

5   comprising sending and storing the connection data for subsequent retrieval by the server

communications device or another server communications device during a subsequent

connection.

In the same field of endeavor, Rizvi teaches a system and method for planned session

termination wherein session information is stored on the client for subsequent retrieval by the

10   server, or another server (Rizvi, see Abstract and col. 2, lines 5-13).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have incorporated the session information retrieval system, as taught by

Rizvi, into the system of Eldumaiati-Hendel for the purpose of providing failover session

connectivity.

15

Claims 2, 4, 5, 9, 11, 13, 15, 16, 20, 22, 24, 26, and 28, are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lechleider et al. (US 6,091,713) in view of Rizvi et al. (US

6,199,110).

20   As per claims 2, 13, 24, 26, and 28, Lechleider teaches a method to send, from a server

communication device, to a data access device, a connection data request, and further to receive

at the server communication device, the connection data from the data access device, the

connection data associated with one or more prior connections between the server

communications device and the data access device and further store the connection data in the

data access device in a non-permanent manner (Col. 3, lines 30-35; Col. 5, lines 65-66; Col. 4,

lines 34-37; Col. 9, lines 35-45: Lechleider teaches establishing an end to end voice band modem

5   connection from a logic device, computer with a modem, to a remote computer of a network

service provider, and collects information from the modem, where the information can be data

pertaining to previous connections such as: not being able to connect, being previously

disconnected or having been connected at a lower than optimal data transfer rate, and further

storing the data in the modem's internal registers).

10   However, Lechleider does not explicitly teach a system and method further comprising

sending and storing the connection data for subsequent retrieval by the server communications

device or another server communications device during a subsequent connection.

In the same field of endeavor, Rizvi teaches a system and method for planned session

termination wherein session information is stored on the client for subsequent retrieval by the

15   server, or another server (Rizvi, see Abstract and col. 2, lines 5-13).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have incorporated the session information retrieval system, as taught by

Rizvi, into the system of Lechleider for the purpose of providing failover session connectivity.

20   As per claims 4 and 15, Lechleider-Rizvi further teaches determining a performance

characteristic of the communication system using the retrieved connection data (Abstract; Col. 7,

lines 24-47: the system gives network service providers the ability to predict the performance of

any broadband transmission channels).

As per claims 5 and 16, Lechleider-Rizvi further teaches configuring a component

5   connected to the communication system using the retrieved connection data (Col. 5, lines 56-65:

Modems use the information to determine the optimum operating conditions when making an

end-to-end connection).

As per claims 9 and 20, , Lechleider-Rizvi further discloses a reduced training connection

10   protocol used by the data access device where the connection data indicates a reset of the

reduced training connection protocol should be considered (Col. 5, lines 56 - 65; Col. 9, lines 50-

66; Col. 10, lines 1-17; Col. 9, lines 40-41; Lechleider teaches any modem and protocol which

collects information about analog properties of an end-to-end connection. He further teaches the

ISP to determine the root cause of a faulty connection and guarantee pre-specified levels of

15   performance, such as not connecting at optimal connection rates).

As per claims 11 and 22, , Lechleider-Rizvi further teaches the data access device is an

analog modem, a digital subscriber line modem, an integrated digital network modem, a cable

modem, a power line modem, and a wireless modem (the system gives network service providers

20   the ability to predict the performance of any broadband transmission channels (Abstract; Col. 7,

lines 24-47).

Claims 6, 10, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider-Rizvi, in view of Eldumiati et al. (US 2002/0012388 A1), and further in view of Bhatia et al. (US 6,118,768).

5   As per claims 10 and 21, Lechleider-Rizvi discloses the claimed invention as described above. Lechleider-Rizvi teaches that by storing the identifiers in the modems, the system then is able to use the information collected by the modems to estimate the performance of the subscribers (Lechleider, Abstract: Col. 3, lines 23-27). However Lechleider-Rizvi does not explicitly teach the connection data comprising of a server communications device identifier, a

10   data access device identifier, an Internet Service Provider identifier, a software version identifier, or a recently used Internet Protocol Address.

          Eldumiati discloses the exchange of information containing a platform identifier, a controller revision, a DSP revision, a firmware revision, a customer platform identifier, customer code revision identifier, modem initialization strings and other configuration information and

15   remote query by the central site of client AT command responses (Page 2, paragraphs [00250]-[0029]; Page 3, paragraphs [0039]-[0046]).

          It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Eldumiati in the system of Lechleider-Rizvi, because by storing the identifiers in the modems, it is helpful in identifying and diagnosing connectivity

20   problems and it enables the ISP to determine if the client modem requires a code update by analyzing any revision data contained in the exchange (Page 2, paragraph [0030]). However, Eldumiati doesn't explicitly teach further storing recently used Internet Protocol Addresses.

Bhatia teaches an ISDN LAN modem that automatically adapts itself to a current network

environment of a workstation connected thereto, via the LAN, and then obtains configuration

information from a user, and further stores the IP addresses and subnets (Abstract; Col. 24, lines

40-41).

5   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Bhatia in the system of Lechleider, because by storing the

identifiers in the modems, it allows the modem to transparently establish the connection between

the workstations and the ISP without prompting the user (Col. 5, 43-45).

10   As per claims 6 and 17, Bhatia disclose the claimed invention as described above.

Lechleider-Rizvi-Eldumiati-Bhatia further discloses storing IP addresses in a router connected to

the communication system (Bhatia: Fig. 1; Col. 5, lines 10-35).

Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

15   **Lechleider-Rizvi, and further in view of Karpoff (US 2001/0049740 A1).**

As per claims 3 and 14, Lechleider-Rizvi disclose the claimed invention as described

above but does not explicitly teach the connection data request to comprise of offset and length

parameters.

20   In the same field of endeavor, Karpoff teaches a system and method for providing

information over wide area networks. Karpoff further teaches a server sending a data request to a

controller device containing a controller card, and such request contains file offset and the length

of the file (Page 9, paragraph [0116]).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Karpoff in the system of Lechleider-Rizvi, because by

5   including an offset and length in the data request, the data being read can be delivered without

further involving the server (Page 2, paragraph [0022]).

Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lechleider-Rizvi, and further in view of Yip et al. (US 6,374,375).

10

As per claims 7 and 18, Lechleider-Rizvi disclose the claimed invention as described

above but does not explicitly teach the data access device to support a reduced training

connection protocol and using the connection data to reset the protocol.

Yip discloses a modem transmitting data in the data mode to initiate retraining. Yip

15   teaches an ITU-T standardized modem to send test signal embedded in the data to a second

modem where second modem compares the test signal and if needed, retrains the modem

(Abstract; Col. 2, lines 25-56).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Yip et al. in the system of Lechleider-Rizvi, because by

20   transmitting and monitoring a test signal in the data mode advantageously provides a way for the

modem to monitor changing line conditions in the data mode that is simple, transparent and

independent (Yip: Col. 2, lines 51-54).

Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechleider-Rizvi-Yip, and further in view of Davis et al. (US 6,611,563).

5   As per claims 8 and 19, Lechleider-Rizvi-Yip discloses the claimed invention as described above and further teaches using ITU-T Recommendation V.34. However, Lechleider-Rizvi-Yip does not explicitly teach using an ITU-T Recommendation V.92 protocol.

Davis teaches a data access device connected to a PSTN Network further connected to a Server Communication Device, which is then connected to an ISP server, where the V.90

10   standard has been implemented (Fig .1; Col. 1, lines 45-67; Col. 2, lines 1-40). Examiner notes that ITU-T Recommendation V.92 is a simple enhancement of V.90 incorporated here within.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any ITU-T recommendation in the system of Lechleider-Rizvi-Yip because any ITU-T recommendation would have been capable to transfer data from end-to-end connections

15   over a telephone network in a given period of time (Yip: Col. 1, lines 23-38) and because V.90 takes advantage of the digital conversions that have been made in the OSTN, and V.90 technology can accelerate data downstream from the Internet or other information source to a subscriber's computer (Davis: Col. 1, lines 45-63).

20   *Response to Arguments & Amendments*

Applicant's arguments filed September 23, 2004 have been considered, but are moot in view of the new grounds of rejection. The applicant argued in substance that the prior art of

record does not teach a system wherein the connection data is previously sent from the server

and retrieved subsequently. The new grounds of rejection teaches this feature.
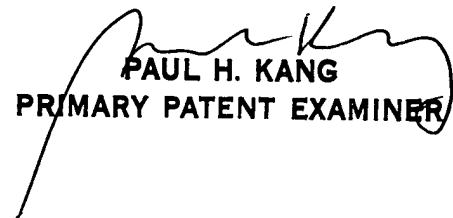
Conclusion

5   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Paul H Kang whose telephone number is (571) 272-3882. The

examiner can normally be reached on 9 hour flex. First Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

10   supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

15   applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PAUL H. KANG
PRIMARY PATENT EXAMINER